WASHINGTON AGRICULTURAL CHEMICAL USAGE CARROTS, PROCESSING August 2005

NATIONAL AGRICULTURAL STATISTICS SERVICE

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CARROTS, PROCESSING

Results of the 2004 Vegetable Chemical Use Survey are presented in the following tables. The survey was designed to collect data on chemical applications made from the end of the 2003 harvest through completion of the 2004 harvest from a sampling of vegetable growers in Washington. Targeted crops in Washington included asparagus, processing carrots, processing sweet corn, dry onions, and processing green peas. The probability nature of the survey allowed for estimates that are representative of chemical use on all targeted vegetables in the state.

Survey results include estimates of total area treated, number of applications, rates per application and per crop year, and total pounds of chemicals applied. Data are summarized for the active ingredients of pesticides and other chemicals applied. Pesticide data were collected for specific formulations of active ingredients (trade name products) and then converted to active ingredient. Therefore, the estimates associated with a particular active ingredient may represent applications of several trade name products. Pesticide application rates also reflect partial coverage applications as a result of band, spot, and alternate row spraying techniques.

Within the surveyed states, herbicides were also widely utilized on carrots for processing acreage. Applications were reported on 81 percent of the surveyed acreage. Linuron was the predominate choice covering 81 percent of the acreage followed by Trifluralin with 27 percent, and Fluazifop-P-butyl with 17 percent. Insecticides were applied to 50 percent of the acres. Esfenvalerate was the only insecticide used on 42 percent of the acres. Fungicides were applied to 63 percent of the acreage. Chlorothalonil was the most utilized, covering 48 percent of the acreage followed by Copper Hydroxide on 22 percent of the acreage. Fertilizer information was not collected on the 2004 Vegetable Chemical Use Survey.

Carrots, Processing: Fertilizer Use Percent of Acres Treated, Program States & Total, 2002 & 2004

State	Planted Acreage		Percent of Acres Treated 1/					
			Nitrogen		Phosphate		Potash	
	2002	2004	2002	2004	2002	2004	2002	2004
	1,000 Acres		Percent					
California	2,100	4,300	86	-	81	-	25	-
Texas	2,100	1,000	98	-	94	-	91	-
Washington	4,700	5,600	52	-	30	-	30	-
Wisconsin	4,800	4,200	71	-	71	-	84	-
TOTAL	**13,700**	**15,100**	**71**	**-**	**62**	**-**	**57**	**-**

1/ Refers to acres receiving one or more applications of a specific fertilizer ingredient. - Fertilizer use was not included in the 2004 Vegetable Chemical Usage Survey.

Carrots, Processing: Agricultural Chemical Application, Washington, 2002 & 2004 1/

Active Ingredient 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	2002	2004	2002	2004	2002	2004	2002	2004	2002	2004
	Percent		Number		Percent					
Herbicides										
Linuron	96	100	2.0	1.6	0.64	0.60	1.31	0.97	5.9	5.4

1/ Planted acres in 2002 and 2004 for Washington were 4,700 acres and 5,600 acres respectively.

2/ Insufficient reports to publish data for the following agricultural chemicals: 2002: Herbicides: Clethodim, Fluazifop-P-butyl, Glyphosate, Paraquat, Sethoxydim, Trifluralin. Insecticides: Diazinon, Esfenvalerate, Oxamyl. Fungicides: Chlorothalonil, Mefenoxam, Metalaxyl, Sulfur. Other Chemicals: Dichloropropene, Metam-sodium. 2004: Herbicides: Bentazon, Clethodim, Iprodione, Mefenoxam, Sethoxydim, Sulfur. Insecticides: Diazinon, Endosulfan, Esfenvalerate. Fungicides: Azoxystrobin, Chlorothalonil, Copper hydroxide. Other Chemicals: Chloropicrin, Dichloropropene, Metam-sodium.

3/ Refers to acres receiving one or more applications of a specific agricultural chemical.

Note: Data may not multiply across due to rounding.

Carrots, Processing: Pesticide Applications, Planted Acreage & Percentage Receiving Applications, Program States & Total, 2002-2004

State	Planted Acreage		Area Receiving 1/							
			Herbicides		Insecticides 2/		Fungicides		Other Chemicals	
	2002	2004	2002	2004	2002	2004	2002	2004	2002	2004
	1,000 Acres		Percent							
California	2,100	4,300	56	38	15	16	42	37	30	**
Texas	2,100	1,000	87	87	**	46	**	55	**	**
Washington	4,700	5,600	97	100	**	82	71	**	**	**
Wisconsin	4,800	4,200	99	100	97	96	97	88	**	**
TOTAL	**13,700**	**15,100**	**90**	**81**	**64**	**50**	**77**	**63**	**35**	**36**

*** Insufficient reports to publish percent of area receiving.*

1/ Refers to acres receiving one or more applications of a specific pesticide class.

2/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredients are not comparable between products.

Carrots, Processing: Agricultural Chemical Applications, Program States, 2002-2004 1/

Active Ingredient 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	2002	2004	2002	2004	2002	2004	2002	2004	2002	2004
	Percent		Number		Pounds Per Acre				1,000 Pounds	
Herbicides										
Clethodim	-	11	-	1.2	-	0.11	-	0.12	-	0.2
Fluazifop-P-butyl	55	17	1.0	1.2	0.17	0.13	0.18	0.16	1.3	0.4
Linuron	86	81	2.2	2.1	0.60	0.56	1.33	1.17	15.8	14.3
Sethoxydim	12	-	1.0	-	0.16	-	0.16	-	0.3	-
Trifluralin	39	27	1.0	1.0	0.53	0.68	0.56	0.68	3.0	2.8
Insecticides										
Diazinon	22	-	1.4	-	1.04	-	1.46	-	4.5	-
Esfenvalerate	40	42	4.9	3.7	0.03	0.02	0.16	0.09	0.9	0.6
Fungicides										
Azoxystrobin	1	-	1.7	-	0.17	-	0.29	-	0.1	-
Chlorothalonil	64	48	2.9	3.7	1.15	0.93	3.39	3.46	29.5	25.3
Copper hydroxide	-	22	-	1.0	-	0.44	-	0.45	-	1.5
Mefenoxam	19	-	1.2	-	0.20	-	0.25	-	0.7	-
Sulfur	16	-	1.0	-	5.81	-	5.98	-	13.1	-
Other Chemicals										
Dichloropropene	29	32	1.0	1.0	85.92	118.86	88.94	118.86	355.7	579.0
Metam-sodium	22	-	1.1	-	134.36	-	147.58	-	445.4	-

1/ Planted acres for the four major states in 2002 were 13,700 . Planted acres for the four major states in 2004 were 15,100. States included in 2002 and 2004 were CA, TX, WA, and WI.

2/ Insufficient reports to publish data for the following agricultural chemicals: 2002: Herbicides: Clethodim, Dimethenamid, Glyphosate, Metribuzin, Paraquat. Insecticides: Mevinphos, Oxamyl. Fungicides: Benomyl, Copper hydroxide, Iprodione, Metalaxyl. Other Chemicals: Chloropicrin. 2004: Herbicides: Bentazon, Glyphosate, Metribuzin, Pendimethalin, Sethoxydim. Insecticides: Azadirachtin, Carbaryl, Cyfluthrin, Diazinon, Endosulfan, Lambda-cyhalothrin, Malathion, Oxamyl. Fungicides: Azoxystrobin, Boscalid, Copper oxide, Copper resinate, Iprodione, Mefenoxam, Pyraclostrobin, Sulfur. Other Chemicals: Chloropicrin, Metam-sodium.

3/ Refers to acres receiving one or more applications of a specific agricultural chemical. Note: Data may not multiply across due to rounding.